



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-1024; Directorate Identifier 2013-NM-140-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Bombardier, Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes. This proposed AD was prompted by reports of a fractured wing-to-fuselage strut attachment joint bolt. This proposed AD would require doing a torque check of all wing-to-fuselage strut attachment joint bolts, and repairing or replacing if necessary. For certain airplanes this proposed AD would require a detailed inspection for corrosion, damage, and wear of each wing-to-fuselage strut attachment joint bolt and associated hardware, and replacing if necessary; and a borescope inspection for corrosion and damage of the bore hole and barrel nut threads, and repairing or replacing if necessary. We are proposing this AD to detect and correct fractured bolts, which could result in reduced structural integrity of the wing-to-fuselage strut attachment joint and subsequent loss of the wing.

DATES: We must receive comments on this proposed AD by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Jeffrey Zimmer, Aerospace Engineer, Airframe and Propulsion Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7306; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-1024; Directorate Identifier 2013-NM-140-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will

also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2013-17R1, dated June 27, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

There have been two in-service reports of a wing-to-fuselage strut attachment joint bolt found fractured during routine maintenance. Laboratory examination of one fractured bolt revealed that the fracture was attributed to stress corrosion cracking.

Failure of the bolts could compromise the structural integrity of the wing-to-fuselage strut attachment joint and could lead to a subsequent loss of the wing.

This [Canadian] AD mandates the inspection and rectification, as required, of the wing-to-fuselage strut attachment joint bolts and associated hardware.

* * * * *

Required actions include doing a torque check of wing-to-fuselage strut attachment joint bolts, and repairing or replacing if necessary. For certain airplanes, required actions include a detailed inspection for corrosion, damage (including but not limited to scratching, cracking, pitting, cross threads, etc.), and wear of each wing-to-fuselage strut attachment joint bolt and associated hardware, and replacement if necessary; and a borescope inspection for corrosion and damage of the bore hole and barrel nut threads, and repair or replacement if necessary. You may examine the MCAI in the AD docket on

the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-1024.

Relevant Service Information

Bombardier has issued Service Bulletin 8-57-47, Revision A, dated May 29, 2013. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Differences Between This Proposed AD and the MCAI or Service Information

In many FAA transport ADs, when the service information specifies to contact the manufacturer for further instructions if certain discrepancies are found, we typically include in the AD a requirement to accomplish the action using a method approved by either the FAA or the State of Design Authority (or its delegated agent).

We have recently been notified that certain laws in other countries do not allow such delegation of authority, but some countries do recognize design approval organizations. In addition, we have become aware that some U.S. operators have used repair instructions that were previously approved by a State of Design Authority or a

Design Approval Holder (DAH) as a method of compliance with this provision in FAA ADs. Frequently, in these cases, the previously approved repair instructions come from the airplane structural repair manual or the DAH repair approval statements that were not specifically developed to address the unsafe condition corrected by the AD. Using repair instructions that were not specifically approved for a particular AD creates the potential for doing repairs that were not developed to address the unsafe condition identified by the MCAI AD, the FAA AD, or the applicable service information, which could result in the unsafe condition not being fully corrected.

To prevent the use of repairs that were not specifically developed to correct the unsafe condition, this proposed AD would require that the repair approval specifically refer to the FAA AD. This change is intended to clarify the method of compliance and to provide operators with better visibility of repairs that are specifically developed and approved to correct the unsafe condition. In addition, we use the phrase “its delegated agent, or by the DAH with State of Design Authority design organization approval, as applicable” in this proposed AD to refer to a DAH authorized to approve required repairs for this proposed AD.

Costs of Compliance

We estimate that this proposed AD affects 94 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD.

We also estimate that it would take about 107 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$5,476 per product. Based on these figures,

we estimate the cost of this proposed AD on U.S. operators to be \$1,369,674, or \$14,571 per product.

We have received no definitive data that would enable us to provide a cost estimate for the repairs or replacements specified in this proposed AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This proposed regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:

Bombardier, Inc.: Docket No. FAA-2013-1024; Directorate Identifier 2013-NM-140-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes; certificated in any category; serial numbers 003 through 672 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Reason

This AD was prompted by reports of a fractured wing-to-fuselage strut attachment joint bolt. We are issuing this AD to detect and correct fractured bolts, which could result in reduced structural integrity of the wing-to-fuselage strut attachment joint and subsequent loss of the wing.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Torque Check

At the applicable time specified in paragraph (g)(1) or (g)(2) of this AD: Do a torque check of the wing-to-fuselage strut attachment joint bolts, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013.

(1) For airplanes that have accumulated fewer than 40,000 total flight cycles, and have less than 15 years in service since new, as of the effective date of this AD: Do the

torque check before the accumulation of 42,000 total flight cycles, or within 16 years in service since new, whichever occurs first.

(2) For airplanes that have accumulated 40,000 total flight cycles or more, or have 15 years or more in service since new, as of the effective date of this AD: Do the torque check within 2,000 flight cycles or 12 months after the effective date of this AD, whichever occurs first.

(h) Inspection and Corrective Actions

(1) If only one bolt fails the torque check, before further flight, replace the bolt, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013; and before further flight do the actions specified in paragraphs (h)(3)(i) and (h)(3)(ii) of this AD.

(2) If more than one bolt fails the torque check, before further flight, repair, using a method approved by the Manager, New York Aircraft Certification Office (ACO), FAA; or Transport Canada Civil Aviation (TCCA) (or its delegated agent or by the Design Approval Holder with the TCCA design organization approval). For a repair method to be approved, the repair approval must specifically refer to this AD.

(3) If all bolts pass the torque check, before further flight, do the actions specified in paragraphs (h)(3)(i) and (h)(3)(ii) of this AD, as applicable.

(i) Do a detailed inspection for corrosion, damage (including but not limited to scratching, cracking, pitting, and cross threads, etc.), and wear, of each wing-to-fuselage strut attachment joint bolt and associated hardware, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated

May 29, 2013. If any bolt or hardware has corrosion, damage, or wear, before further flight, replace the affected part, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013.

(ii) Do a borescope inspection for corrosion and damage (including but not limited to scratching, cracking, pitting, and cross threads, etc.) of the bore hole and barrel nut threads, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013, except as provided by paragraph (i) of this AD.

(A) If any corrosion or damage is found in the barrel nut threads, before further flight, replace the barrel nut, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013, except as provided by paragraph (i) of this AD.

(B) If any corrosion or damage is found in the bore of the hole, before further flight, repair, using a method approved by the Manager, New York ACO, FAA; or Transport Canada Civil Aviation (TCCA) (or its delegated agent or by the Design Approval Holder with the TCCA design organization approval). For a repair method to be approved, the repair approval must specifically refer to this AD.

(i) Exception to Service Information

Where Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013, specifies to contact the manufacturer for repair information, this AD requires repairing before further flight using a method approved by the Manager, New York ACO, FAA; or TCCA (or its delegated agent, or by the Design Approval Holder with TCCA design

organization approval). For a repair method to be approved, the repair approval must specifically refer to this AD.

(j) Credit for Previous Actions

This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-57-47, dated March 16, 2012.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York ACO, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they were approved by the State of Design Authority (or its delegated agent, or by the Design Approval Holder with a State of

Design Authority's design organization approval). For a repair method to be approved, the repair approval must specifically refer to this AD. You are required to ensure the product is airworthy before it is returned to service.

(l) Special Flight Permits

Special flight permits, as described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), are not allowed.

(m) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2013-17R1, dated June 27, 2013, for related information, which can be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-1024.

(2) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view

this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on November 29, 2013.

John P. Piccola,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

[4910-13-P]

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